

# **Gender differences in the impact of service failure types and service recovery on satisfaction**

## **Abstract**

This study analyzes the moderating role of the customer's gender on the effects of the type of service failure, the magnitude of the failure, and the type of service recovery on customer satisfaction after service recovery. An experiment was performed with a sample of 357 participants. Consistent with previous studies, the results show that, in general, customers who experience an outcome-related (process-related) service failure are more satisfied by tangible (psychological) recovery efforts. However, for severe outcome-related failures, females show higher satisfaction with psychological recoveries than with tangible recoveries. Additionally, this study shows that process-related failures generate worse customer satisfaction in females than in males. The results suggest that firms should use customer's gender as a variable to manage service failures to restore satisfaction efficiently.

*Keywords:* service failure type; failure magnitude; service recovery type; post-recovery satisfaction; customer's gender

*JEL (Journal of Economic Literature) classification:* M30, M31, L80

## **1. Introduction**

Service failures are a key desertion reason for business clients (Ahn et al. 2006). Companies normally define recovery strategies to compensate for these failures and problems, seeking the reduction of the clients desertion rate. Previous research shows that the type of service failure, the failure magnitude, and the type of recovery strategy used may influence the post hoc clients (dis) satisfaction (e.g. Craighead et al. 2004; McCollough 2009; Miller et al. 2000; Weun et al. 2004). Analyzing these different variables jointly, Chuang et al. (2012) observe that in the case of service failures related with the result (process), tangible (psychological) service recovery strategies are better for generating superior satisfaction levels, after a service failure.

Thus, service recovery customization is a fundamental determinant of the restauration of customers satisfaction levels (Abney et al. 2017; Mjated Hammami et al. 2018). Following this line of research, it can be argued that further customization may be relevant for this purpose and should consider other key observable segmentation variables. For example, due to the differences in responses to marketing stimuli shown by women and men, gender is a very much used segmentation variable (Melnyk et al. 2009; Olavarrieta et al. 2012; Pascual-Miguel et al. 2015). Gender has also the advantage of its ease of measurement. Therefore, in the case of service failures recovery strategies, we argue that firms may consider gender as another key variable to manage these failures and design the best responses in order to recuperate customer satisfaction levels in a more efficient manner.

Previous service failure research studies have controlled for client gender (e.g. Cambra-Fierro et al. 2013; Kalamas et al. 2008; Mattila et al. 2003; McColl-Kennedy et al. 2003); however, there are no other studies to our knowledge that look to assess the four-

way interactions between failure type, failure size, service recovery strategy and gender.. In fact, Chuang et al. (2012, p. 268) propose that future research should include gender as a moderating variable when studying the best service recovery strategies. This is an important gap in the literature because it may have important implications for the study and management of service failures and recovery. This study will analyze the role of gender as a moderating variable of the effects of service failures type and size on customer satisfaction, when considering two different types of recovery strategies (tangible or psychological).

Following the literature that observes that women tend to concentrate more in the process and affect when dealing with service failures (compared to men that focus more on the outcomes or tangible results; e.g. Croson and Gneezy 2009; McColl-Kennedy et al. 2003), this article suggests that a 4-way interaction may be the best representation of customer reactions to failures and service recovery actions from the firm. Specific hypotheses are derived suggesting potentially different best or optimal recovery strategies for women and men, depending on the type and size of the service failure.

## **2. Conceptual framework**

### *2.1. The effects of service failure type, failure size, and the type of recovery strategy on customer satisfaction.*

Smith et al. (1999) identified two types of service failures: failures in the service result and failures in the process. Service result failures refer to problems that emerge at the moment of completing the client requirements (regarding the service the clients have paid for). Process service failures refer to inconveniences in the form of delivering the service by the firm's employees. This classification is the most used by service failure researchers (Chuang et al. 2012). Result failure examples are: when an Internet service you have hired

is down and you cannot connect, when you experience call interference and noise , or eventually when service is completely interrupted (for example in a power outage in your city area). Process related failures are, for example, when a maintenance employee of the cable company does not understand the failure reason and additionally does not respond nicely to the clients questions, or when you have to wait for 20 minutes on the phone before a real human answers, or when you get to the operator at a hotel, and she is in a bad mood and handles your requests discourteously.

Service failures can also be classified based on their magnitude between small and big failures. In the case of results related failures a small failure will be the interference in a phone call and a large failure will be the service interruption. For process related failures, a small one will be to wait for 10 minutes in line, and a big failure will be the case where you are not able to connect with a service representative after a 30 minute wait, or that the service rep with not much information disregard your claim or request and tells you that she cannot do anything for you or solving your problem (Chuang et al. 2012; Hess et al. 2003).

Service failure recovery actions are the activities implemented by the service provider to compensate the client for the loss he (she) experienced due to a deficient service provision (i.e. service failure) (Bell y Zemke 1987; Gronroos 1988). Becker (2004) defines service recovery as those actions implemented by the firm in order to transform negative perceptions to positive perceptions (or at least neutral ones). Based on the recovery paradox, Gustafsson (2009) understands service recovery as the implementation of actions to transform failures into a positive scenario (if possible).

The service paradox indicates that, in occasions, a good performance in recovery actions may generate higher satisfaction levels than prior to the failure, or compared to a situation where no failure were experimented by the customer (De Matos et al. 2007;

McCollough and Bharadwaj 1992; McCollough 2009). According to this author, service recovery represents an outstanding opportunity for service providers to even increase the satisfaction of customers. According to Gustafsson (2009) service recovery represents an outstanding opportunity for service providers to even increase the satisfaction of customers.

Two different types of recovery strategies have been established in the literature (Miller et al. 2000): tangible recovery and psychological recovery strategies. Tangible recoveries are compensations for the costs and problems associated with or generated by the service failure, and may include product changes, service extensions, or additional benefits. Psychological recoveries include two types of actions: offering apologies to the clients and showing empathy to the client (Bell y Ridge 1992; Miller et al. 2000).

Accordint to Thaler (1985) and his mental accounts theory, service recovery strategies should be defined depending on the type of failure, since consumers tend to categorize losses and expect that these losses will be cancelled out (at least) by actions of the same type. Then result or outcome failures would require material or tangible recoveries in order to be cancelled out, while process failures will require psychological recoveries to be cancelled out. For example, Smith et al. (1999) comment that the losses in satisfaction levels caused by a service failure should be solved with actions and resources that belong to the same mental account, in order for perceived justice increases from the customer side. A related explanation to mental accounts is the one based on prospect theory, that maybe important to differentiate particularly the context of major versus minor service failures. According to this theory (Kahneman and Tversky 1979), clients will react differently to losses and gains. In the case of losses, customers may consider any recovery action as insufficient, particularly if it is a major failure. The major failure will be always higher than most recovery actions that may be offered by the service provider.

Chuang et al. (2012) tested these ideas and found consistent evidence, suggesting mental account and prospect theory are relevant for studying and understanding consumer reactions to service failures and firm recovery strategies. However, we believe that there is a relevant variable that can affect and moderate the above findings and this variable is gender.

Gender has been studied in consumer research and psychology in terms of how male and female subjects may be different in terms of their cognitive and thought processes, being more interested in the interactions with others (instead of the focus matter alone) and the quality of those interactions; the way they think (holistically vs partitioned); and the way they react to failures or mis happenings (more emotional or more analytical. We think, that both marketing researchers and service managers will need to take this variable into account in order to improve their understanding and success rate with service recovery strategies.

This study extends the relevant work of Chuang et al. (2012) by looking at the moderating role of gender in these service failure-recovery strategy-client satisfaction relationships. Additionally, by testing the relationships in a different cultural context (Latin America), we extend the generalizability of the main propositions and findings of Chuang et al (2012).

## *2.2. The moderating role of client gender*

While male subjects tend to be more goal, task and results oriented, female subjects tend to be more process, form, and behaviors oriented (McColl-Kennedy et al. 2003; Otnes y McGrath 2001; Sharma et al. 2012). Women pay more attention to the way they are treated, compared to men. Men tend to be more utilitarian, emphasizing effectiveness and

efficiency of purchase experiences, being more functional in their purchase attitudes (Diep and Sweeney 2008; Dittmar et al. 2004). For this reason, we expect that male clients will pay more attention to result failures (e.g. service interruption, call interferences) compared to process failures (e.g. a bad, less empathetic comment by the service representative or a long wait on the phone).

In contrast, women tend to maximize the interpersonal matters in their relationships, emphasizing the role of the process instead of the result (e.g. a good conversation vs. a good solution to a problem; Gilligan 1982). Homburg and Giering (2001) observe that in the case of services female clients tend to base their satisfaction and repurchase decisions on the interaction process with the service provider employees more than the satisfaction with the product.

Women prefer representatives that have social skills, being able and willing to listen, understand, show attention and care, service orientation and kindness with clients. (Iacobucci and Ostrom 1993; Sparks and Callan 1997). Then, it is very likely that process failures will generate higher losses in satisfaction for female clients compared to male clients. The following hypotheses are proposed:

**H1a.** Result failures generate lower post-hoc satisfaction in men compared to women.

**H1b.** Process failures generate lower post-hoc satisfaction in women compared to men.

Mattila et al. (2003) and Mattila et al. (2009) observe that women are more sensible to affect expressions and apologies by the services employees. McColl-Kennedy et al.

(2003) indicate that women assign a higher level of importance than men, to being listened and serviced after a failure is experienced.

Men to represent themselves as independent, while women tend to represent themselves as interdependent or belonging to a group (Cross and Madson 1997; Melnyk et al. 2009). Women tend to develop more collective traits oriented towards establishing social relationships compared to men (Iacobucci and Ostrom 1993; Kashdan et al. 2009). Accordingly, women may be able to feel more empathy with the firm and particularly its employees when things may go wrong (Fiske and Taylor 1991; Wharton and Erickson 1993). For these reasons, and consistently with mental accounts, women may be more influenced by psychological recoveries than men. Then:

**H2a.** Tangible recoveries generate more post-hoc satisfaction in male consumers than female consumers.

**H2b.** Psychological recoveries generate more post-hoc satisfaction in female consumers than male consumers.

We believe that these differences may be even more relevant for marketers in the case of major result service failures. According to the literature, women experience and express stronger emotional reactions (e.g. anger, anxiety, deception) than men (Croson and Gneezy 2009; Eriksson and Simpson 2010; Kelly and Hutson-Comeaux 2000). Smith and Bolton (2002) show that emotional reactions to service failures increase consumers attention to service recovery actions. A major service failure in results or outcomes, may generate a stronger emotional reaction by women, thus associating this loss to the process and the emotional “harm” and therefore, consistent with mental accounts theory will have



stronger expectations to be compensated in “emotions”, with a psychological recovery strategy.

Additionally, women may include this psychological loss (emotional reaction) to results losses stronger than men, given women tend to be more holistic information processors, and men tend to be more selective or specific in their processing (Darley and Smith 1995). Also, women may consider of higher value the emotional loss than the actual service failure given what Cambra-Fierro et al. (2013) observe that women tend to show a stronger sense of justice at the time of service failure. As a consequence we suggest the following hypothesis:

**H3.** For major result service failures, women will present higher post-hoc satisfaction with psychological recoveries than tangible recoveries.

### **3. Method**

An experimental approach was taken to test the previous hypotheses. Different scenarios were designed in order to convey different kinds of failures and alternative recovery strategies, with the purpose to assess subjects satisfaction after facing those scenarios. The design included four variables or factors: failure type (results vs. process), failure magnitude (minor vs. major), recovery strategy (tangible vs. psychological), and customer gender (female, male).

#### *3.1. Sample and data collection*

In order to test the hypotheses mobile phone services was the selected category. Mobile phones are of universal use nowadays and represent a relevant category for most

consumers. Following previous research on service failure and recovery (Chuang et al. (2012), Choi and Mattila 2008, Hess et al. 2003, Hui et al. 2011, Miller et al. 2000, and Smith et al. 1999) a university student sample was chosen, being all legal adults in the country, and relevant users of the service category chosen. Given the relative homogeneity of the sample, it provides a scenario of strong internal validity to the experimental design (Manzur et al. 2012). The final sample includes 357 subjects, 45% female users, and average age of 21 years. Study participants were contacted in person in a Chilean university (Santiago), and each participant was assigned randomly to one study scenario.

Each scenario includes a hypothetical situation for the client, facing a particular type of service failure (results, process) and failure magnitude (minor, major). After this, the scenarios included information explaining the type of service recovery actions offered to them by the mobile phone company. In the next page, subjects needed to state their satisfaction levels using a 5-item measure. Finally, gender and general information of each subject were collected.

### *3.2. Variables*

For result failures, experiencing call interferences was selected as a minor failure, and service interruption as a major failure. In the case of process-related failures, waiting 15 minutes or more on line was the scenario for minor failures, and waiting over an hour plus a discourteous service rep indicating the impossibility to solve the problem was the scenario for major failures (Chuang et al. 2012; Hess et al. 2003). With regards to the service recovery options, the tangible recovery used was providing discounts to cinema tickets and the psychological recovery was the service rep offering apologies to the customer (consistent with Miller et al. (2000) and Chuang et al. (2012)).

The 7-point Likert scale used to measure customer satisfaction after recovery included 5 items taken from Chuang et al. (2012) and Vásquez et al. (2010): “I am satisfied with the way the problem was addressed and solved”, “I am happy with the way my problem was solved”, “I am satisfied with the treatment provided by the employees involved in solving the problem”, “I am satisfied with the process and the resources used to solve the problem”, “In my opinion, the firm has provided a satisfactory solution to this particular problem”.

### *3.3. Manipulation checks*

Previous to the final study the treatments were randomly assigned to a convenience sample of 65 subjects, who evaluate the realism of the hypothetical scenarios (Hess et al. 2003). They also rated the failure types, failure magnitude, and recovery types of each scenario. Results show a medium to high level of realism ( 5.6 in a 7 point scale). Mean difference tests were performed for the other manipulations finding statistically significant differences for all of them: type of failure (result vs process,  $p < .01$ ), failure magnitude (minor, major:  $p < .01$ ), and type of recovery (tangible vs. psychological:  $p < .01$ ). These results show that participants can discriminate between the levels of the treatments, supporting the use of these manipulations.

## **4. Results**

Considering the proposed hypotheses and previous studies by (Choi and Mattila 2008, Chuang et al. 2012, Hui et al. 2011 and McCollough 2009), we used ANOVA to analyze the data. The dependent variable (e.g., client satisfaction post service recovery actions) is measured using a 5-point Likert scale. Scale reliability of the satisfaction measure was

assessed obtaining a Cronbach alpha of .916, showing high internal consistency. Then, the averages of the 5 items in the scale were used to perform group means and the analysis of variance.

<< INSERT Table 1 here >>

Table 1 presents the customer satisfaction mean for each of the scenarios and Table 2 presents the results for a 4 factor ANOVA. Overall, results show the significance of most main effects (see Table 2). Major failure scenarios generate less satisfaction levels after recovery than minor failure ones ( $S_M = 2.507$  vs  $S_m = 3.290$ ,  $p < .01$ ).

<< INSERT Table 2 here >>

Consistent with Chuang et al. (2012), ANOVA shows an interaction effect between the type of failure and the recovery strategy ( $p < .01$ ). Specifically, for results related failures, tangible recovery strategies generate ( $S_{rt} = 3.067$ ) similar levels of post hoc satisfaction than psychological recovery strategies ( $S_{rp} = 2.850$ ,  $p > .10$ ). For process/related failures however, tangible recovery strategies present lower levels of satisfaction compared to psychological recovery strategies ( $S_{pt} = 2.540$  vs  $S_{pp} = 3.139$ ,  $p < .01$ ).

An interaction effect between failure type and customer gender can be observed as statistically significant ( $p < .05$ ). Specifically, for result failures, men ( $M_r = 2.876$ ) and women ( $W_r = 3.041$ ) present similar post-hoc satisfaction levels. For process failures however, men ( $M_p = 3.011$ ) show higher post failure satisfaction than women ( $W_p = 2.667$ ,  $p < .05$ ). As a consequence, we obtain results that show support for H1b but not for

H1a. These results provide support for the idea that female customers care relatively more about the service process than the outcome, and that process failures generate higher dissatisfaction in women clients.

Results show that there is not a direct interaction effect between the type of recovery strategy and client gender ( $p > .10$ ). As a consequence, hypotheses H2a y H2b are not supported. These results are consistent with Karande et al. (2003) and Xu et al. (2014), who did not find gender differences for service recovery types.

Nevertheless, the results so show an interaction effect between the type of failure, failure magnitude, service recovery type and customer gender ( $p < .05$ ). Specifically, results show that for major service failures, women express higher post-hoc satisfaction levels when a psychological service recovery strategy is chosen ( $W_p = 2.864$ ) compared to when a tangible recovery strategy is used ( $W_t = 2.208$ ,  $p < .01$ ). Therefore, hypothesis 3 is supported.

## **5. Discussion**

The objective of this research was to assess simultaneously the influence of four factors (type of failure, failure magnitude, type of recovery strategy and gender) on the satisfaction of consumers after they experience service failure and particular recovery actions performed by the service provider.

This work adds to the service failure and recovery literature the importance of customization of these recovery strategies. In particular, we propose and test that considering gender will help companies to adapt their recovery responses and pick the most efficient ones. Effectively customizing and managing recovery strategies may in fact help generate superior satisfaction levels, and may be key to the existence of the failure paradox

(that customers may feel more satisfied after a failure and right recovery strategy, than a situation where they did not experience a failure)

Consistent with Chuang et al. (2012), for result (process) failures, tangible (psychological) recoveries generate higher satisfaction levels after recovery.

However, for major failures, female clients show higher satisfaction levels after they were offered psychological recoveries (e.g. apologies), compared to tangible recoveries (e.g. cinema ticket discounts). Additionally, process failures generate lesser satisfaction levels in women compared to men.

Following Chuang et al (2012) our results indicate that particular service recovery strategies (tangible or psychological) are not always better options for particular segments (i.e. male or female consumers) and that they should be adapted and chosen considering both the characteristics of the service failure and gender. Marketers will need to consider the type of failure (process or result) and the magnitude of failure (major vs minor) in order to match the most adequate recovery strategy for particular gender segments.

Of course, it can be argued that gender, despite its generalized use as segmentation variable, may be oversimplifying the feminine - masculine dimensions of human beings. Some female (male) customers may have a stronger masculine (feminine) side, and therefore the general propositions tested here may not always hold for every female (male) consumer or for some subsegments within these two groups. We agree with this idea, but we also believe that for simplicity and economic reasons, gender will continue be used as a key variable for segmentation and targeting purposes, and therefore it is important for service providers (e.g. retailers, telecom companies, car garages, banks, etc.) to pay attention to our findings in order to boost recovery strategies success.

### *5.1. Implications for Managers*

Results suggest that firms should use gender as a key variable to manage service failures in order to reestablish client satisfaction. Firms using this criterion, might plan in advance and establish the right service recovery strategies for male and female clients respectively.

In general, our findings indicate that in the case of process failures firms should consider psychological recovery strategies. On the other hand, for result failures, firms should define tangible recovery strategies as the default, unless it is a major failure and a female client is involved. In this case, as stated earlier a psychological recovery strategy will produce better customer satisfaction results.

Results showing that process failures produce larger levels of dissatisfaction in women, should be very much considered by service firms whose customers are mainly female ones. They should place important efforts to reduce this kind of failures, through different mechanisms like personnel selection and training, process quality control and redesign, and defining the adequate role of technology and technological support in those processes.

### *5.2. Limitations and future research*

Our research points to a relevant and observable segmentation variable that should be considered in service recovery strategies. Future studies can extend these results in different directions. First, it will be important to check the role of failure repetition on satisfaction. Will the results be similar in the case of a first service failure or would it be different in the case of repeated failures. Will women prefer the tangible recovery option after the second or third major service failure, or will they prefer a stronger apology or other source of psychological recovery. In the same line of argument, will satisfaction results will always

come back to a same level (e.g. neutral) after recovery, or will they be reduced regardless of the recovery strategy followed, when service failures are repeated. Will customers work with cumulative memories (they will add all failures to their memories) or will they be able to forget (and erase from their memories) service failure episodes after some time has past since the last failure (1 month, 1 year). Or, there might be a ratio of success to failures that might serve as threshold to generate dissatisfaction, even when service recovery strategies are utilized. Future research may consider time since last failure and failure repetition over time in order to solve these questions.

On a different note, it is important to mention that some research focusing on the co-creation =by clients and sellers= of service recovery actions (Xu et al 2014, Karande et al 2003) has not found any gender effect. For example, the strategy by a service provider of asking a customer (after a failure has occurred) what the firm can do to rectify the problem, did not generate differences in outcomes across genders (Karande et al. 2003). Therefore, checking this third type of recovery strategy: the co/creation or participative recovery strategy, will be important in future research. It might be the case that the main effects are neutral, but taking into account the interaction with failure type or failure magnitude, then gender may make a difference.

Future research may also consider other ready (or easy) to measure variables like age, life-cycle, client transactions (frequency, last purchase date), client complaints (date, frequency, type), transactions value (cumulative transaction value, customer life time value in order to adapt and customize their service recovery actions. These variables may be considered as moderators of the service recovery – satisfaction relationship. Also, some of these variables may be considered as dependent variables themselves. For example, future



studies may consider the effects of service recovery strategies on transaction value or CLV, using gender and other variables (e.g. age, complaints) as moderators.

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**Table 1.** Means of post-recovery satisfaction

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Service Failure Type (SFT)	Failure Magnitude (FM)	Gender (G)	Service Recovery Type (SRT)	
			tangible	psychological
			result (r)	minor (m)
result (r)	minor (m)	male (M)	3.408	3.212
result (r)	Major (M)	female (W)	2.208	2.864
result (r)	Major (M)	male (M)	2.771	2.111
process (p)	minor (m)	Female (W)	2.793	3.274
process (p)	minor (m)	male (M)	3.165	3.376
process (p)	Major (M)	Female (W)	1.923	2.665
process (p)	Major (M)	male (M)	2.278	3.227

**Table 2. ANOVA**

Source	Hypothesis	Sum of squares	df	F	p-value	Partial eta <sup>2</sup>
Service Failure Type (SFT)		1.048	1	1.071	.301	.003
Failure Magnitude (FM)		45.117	1	46.140	.000**	.119
Service Recovery Type (SRT)		2.684	1	2.745	.098	.008
Gender (G)		.590	1	.604	.438	.002
SFT x FM		1.817	1	1.858	.174	.005
SFT x SRT		12.270	1	12.548	.000**	.035
FM x SRT		4.036	1	4.127	.043*	.012
SFT x G	H1	4.793	1	4.902	.027*	.014
FM x G		.586	1	.599	.439	.002
SRT x G	H2	.974	1	.996	.319	.003
SFT x FM x SRT		.026	1	.026	.872	.000
SFT x FM x G		.026	1	.026	.871	.000
SFT x SRT x G		.681	1	.697	.404	.002
FM x SRT x G		2.012	1	2.057	.152	.006

SFT x FM x SRT x G	H3	5.854	1	5.987	.015*	.017
Error		333.441	341			
Total		414.335	356			

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\*p-value < .05, \*\*p-value < .01